



**NORTHERN REGION
FAIRBANKS AREA FORESTRY**

**FOREST LAND USE PLAN AND
PRELIMINARY BEST INTEREST FINDING
FOR
DUNBAR'S END BIRCH #2
NC-1541-F
8/6/2014
ADL 420111**

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INTRODUCTION

A. Purpose

The purpose of this Forest Land Use Plan (FLUP) is to provide sufficient information for reviewers to ensure that the best interest of the State will be served by the Department of Natural Resources, Division of Forestry, Fairbanks Area, offering this proposed timber sale. This FLUP deals with site specific considerations of the sale. The boundaries and precise volume of the sale may be refined if and when the sale is developed. Site specific research has been completed on title considerations, land classifications, applicable land management plans, appropriate silvicultural techniques, regulatory and statutory requirements, and physical conditions that apply to the proposed sale area. The proposal is for the harvest of approximately (+/- 10%) 36.4 acres of land that is predicted to yield approximately (+/- 10%) 451 CCF of birch. The sale design may be altered to mitigate potential conflicts. It will be the responsibility of the Forester-In-Charge to ensure that any purchaser of this sale harvests timber per the sale design and sale contract provisions and adheres to Alaska Forest Resources and Practices Act (AFRPA) best management practices.

B. Five-Year Sale Schedule

The general area and timber type that this proposed sale occupies has been shown as a potential sale area in the current Five-Year Schedule of Timber Sales (FYSTS) for Fiscal Years 2014-2018 as required by AS 38.05.113. It has been listed in previous schedules.

C. Location

The proposed sale is located roughly 30 miles west of Fairbanks within the boundaries of the Doyon Region. Coastal Zone Management considerations do not apply. The proposed sale area is located within section 16 Township 1 South Range 6 West, Fairbanks Meridian. The sale area is shown on the attached map and is within the United States Geological Survey 1:63,360 Quadrangle map titled Fairbanks D-4. The tract is accessed from Fairbanks by driving southwest on the Parks Highway to milepost 343. Turn north on the Old Nenana Highway and drive approximately 2 miles. Turn west on the Standard Creek primary all season logging road and drive approximately 26.5 miles. There is no additional road construction required and the access is all-season.

D. Title, Classification and Other Active or Pending Interests

The acquisition for the land upon which the sale is proposed is based on General Selection 16. The Title was transferred by Patent 50-73-0016. There are no title restrictions on the area. The primary land classification for the area is Forestry per Classification Order NC-82-065. The proposed sale area is within Unit 4D of the Tanana Valley State Forest (TVSF).

E. General Timber Sale Program Objectives

1. **Develop the State's Renewable Resources.** To follow the DNR's constitutional mandate to encourage the development of the State's renewable resources, making them available for maximum use consistent with the public interest. Sustain and promote a healthy, long-term timber industry in the State, through providing a secure source of timber for harvest that produces raw materials for local manufacturing plants when practical while protecting other resources such as fish and wildlife.

2. **Improve the State's Economy.** To help the State's economy by providing royalties to the State in the form of stumpage receipts, as well as contributions to local economies through wages, purchases, jobs and business.
3. **Improve Forest Health.** To improve forest growth and vigor by harvesting and replacing mature stands and stands with declining vigor with new healthy regenerating stands, while protecting and maintaining other resource values. The actions authorized under this decision will follow the constitutional mandate of sustained yield and shall adhere to multiple use management as described in the TVSF Management Plan.
4. **Improve Wildlife Habitat.** Meet the statutory wildlife management objective for the TVSF (AS 41.17.400(e)) that provides for the production of wildlife for a high level of sustained yield human use through habitat improvement techniques, while allowing for timber management and other beneficial uses of public land and resources.

II. LEGAL AUTHORITY

This Division of Forestry is taking this action under the authority of AS 38.05.035 (e) (Best Interest Finding); AS 38.05.110-120 (Alaska Land Act Statutes); 11 AAC 71 (Timber Sale Statutes and Regulations); AS 41.17.010-.950 and 11 AAC 95 (Forest Resources and Practices Statutes and Regulations).

III. ADMINISTRATIVE RECORD

The Division will maintain an administrative record regarding the decision of whether or not to proceed with the action as proposed. This record will be maintained at the DOF's Fairbanks Office filed as NC-1541-F.

IV. SCOPE OF DECISION

This preliminary best interest finding (PBIF) is a part of step three of a six-step process to design, sell, and administer timber sales. This PBIF covers the sale of approximately 36.4 acres of birch fuelwood on state land within the Standard Creek Rd area. The following list summarizes the overall process:

Step 1: Regional planning. The Department of Natural Resources (DNR) develops area plans and state forest management plans to designate appropriate uses for state land, classify the land accordingly, and establish management guidelines for multiple use. These plans determine where timber sales are an allowed use, and what other uses must be considered when designing and implementing sales. Subsequent land use decisions must be consistent with the area plans. The area in this PBIF is covered by the Tanana Valley State Forest Management Plan, and the PBIF is consistent with this plan.

Step 2: Five-year Schedule of Timber Sales (AS 38.05.113). A proposed timber sale must appear in at least one of the two Five-year Schedules preceding the sale. The land covered by this PBIF appeared in the Fairbanks Area 5 Year Schedule of Timber Sales FY2014-2018.

Step 3: Best Interest Finding. DOF must adopt a final BIF before selling timber. A best interest finding is the decision document that:

- Establishes the overall area within which the timber sale may occur,

- Determines the amount of timber that will be offered for sale and the duration of the sale,
- Sets the overall harvest and reforestation strategy for the sale area,
- Determines whether the sale proposal complies with the Constitutional requirement to manage for sustained yield by evaluating the amount of timber in the sale and the annual allowable cut for the affected area,
- Selects the appropriate method of sale (i.e., competitive or negotiated sale), and
- Determines the appraisal method that will be used to determine the sale price.

DOF is issuing this Preliminary BIF covering the decision to sell approximately 36.4 acres of birch fuelwood from state lands within the Standard Creek Rd area in a competitive bid sale for commercial use on 8/6/2014. DOF will consider all written comments received during the 30-day review period.

The final document will be the final BIF for Dunbar's End Birch #2. A person affected by the final decision who provided timely written comment or public hearing testimony on the preliminary decision may appeal it, in accordance with 11 AAC 02.

Step 4: Forest Land Use Plans (AS 38.05.112). Prior to authorizing harvest of timber on any area greater than 10 acres, the DOF must adopt a site-specific Forest Land Use Plan (FLUP) for the harvest area. DOF is issuing this draft FLUP concurrently with the PBIF and will adopt the final FLUP following review of comments. FLUPs specify the site, size, timing, and harvest methods for harvest unit within the sale area. FLUPs also address site-specific requirements for access construction and maintenance, reforestation, and multiple use management. FLUPs are based on additional field work, agency and community consultation, and site-specific analyses by the DOF, and are subject to public and agency review.

Step 5: Timber sales and contracts. Following adoption of the final BIF, and completion of the FLUP, DOF will offer the timber for sale by auctioning competitive sales and/or negotiating some sales with purchasers. The Division will sign a contract with the winning bidder for each sale. The contract will include stipulations to ensure compliance with the best interest finding, FLUP, and statutory requirements.

Step 6: Sale administration. DOF will administer the timber sale and conduct field inspections to ensure compliance with the final BIF, FLUP, timber sale contract, and applicable laws, including the Alaska Forest Resources and Practices Act and regulations (AS 41.17 and 11 AAC 95), and forest management statutes and regulations in AS 38.05 and 11 AAC 71.

V. DISCUSSION OF ISSUES

A. Physical Characteristic of the Sale Area

1. **Topography.** This sale consists of a single unit and ranges from 400 to over 900 feet. The terrain is uneven throughout the sale unit with multiple hogbacks. Average slope grade across the unit are 10 to 25%.
2. **Soils.** The soils of this sale area are classified as Fairbanks silt loam and Brigadier-Ester Complex. Fairbanks series soils are formed in loess and are relatively productive. These soils are well drained and typically have no restrictive layer within the top 72" of the soil profile. Erosion potential for these soils within the units is

- considered low. Brigadier soils are also formed in loess over residuum. Brigadier soils tend to have a restrictive bedrock layer 12 to 24 inches deep in the soil profile and are well drained. Brigadier soils tend to be not as productive as Fairbanks silt loams. Ester Soils are a poorly drained organic silt loam that formed over colluvium and/or loess over residuum. Brigadier and Ester soils have low potential for erosion.
3. **Water bodies.** There are no defined drainages within the proposed unit boundary. The closest water body is Goldstream Creek which is approximately 1.2 miles south of the sale boundary. The sale area presents no obstacles that would prevent implementation of the best management practices of the AFRPA to maintain water quality.
 4. **Stand Conditions.** The timber stand and proposed harvest unit consists of 80 year old birch. Birch occupies approximately 85% of the site. Spruce and incidental aspen occupies 15% of the site. Alder and grass can be found throughout the site. The average DBH for birch is 9.5" and height is 55'. There are approximately 138 birch stems per acre. The birch in this stand is starting to show signs of stem decay. Basal area for birch is 75 square feet/acre.
- B. Historic and Current Land Use**
- The historic uses of the land in the general area have been logging, hunting, trapping, and general trail use. The current uses of the area are recreation, wood cutting, hunting and trapping. Moose hunters use the area heavily during hunting season.
- C. Wildlife Habitat**
- Wildlife typical of the interior are found here and during ground reconnaissance moose sign was observed. There are no known raptor nests within the proposed sale area. No critical wildlife habitat has been identified for this area (TVSF Management Plan), nor has any become apparent during ground reconnaissance.
- Treatments proposed for this stand are projected to enhance habitat conditions for ruffed grouse, moose, hares, and ultimately, lynx, marten and fox. The Minto Flats State Game Refuge is west of the unit. In the past, Alaska Department of Fish and Game, Division of Wildlife Conservation have recommended managing for as much diversity as possible when prescribing harvest unit size, shape and position to mimic the results of wildfire or other stand replacement phases such as insect outbreaks or flood events. To accomplish these objectives snags will be retained to provide late-successional wildlife habitat for hole nesting birds, woodpeckers, small mammals, and other species requiring perching habitat. The unit will be laid out with an uneven edge, along and between timber types. This will create varied edge effect beneficial to many wildlife species.
- D. Fisheries and Water Quality**
- Best management practices will be implemented to ensure water quality standards in all water courses. During review of the FY 2014-2018 FYSTS, the ADF&G, Division of Habitat did not have particular fish or wildlife concerns with the proposed road or harvest area. In reviewing previous schedules, ADF&G had issues with creating increased access onto the Dunbar Trail. There is no expectation that this harvest will have negative impacts on Goldstream Creek. Erosion within the unit will

be mitigated by backfilling skid trails with debris and through the installation of water bars if necessary.

E. Subsistence

The tract has not been designated as a subsistence zone. The proposed sale of timber is anticipated to have no deleterious effects on subsistence activities. Subsistence activities of fishing, trapping, hunting and gathering of berries and other non timber forest products may occur on state owned lands.

F. Recreation and Tourism

There is a RS 2477 (Dunbar-Brooks Terminal Trail) route trail west of the unit serialized as RST 66. Recreation use of this area is moderate to high, but not inconsistent with a timber sale. Primarily it consists of hunting and trapping activity, as well as some recreational snow machining and dog mushing. If timber harvest activities occur in winter, sufficient snow cover will be left on the roads to enable any winter recreational use. Cross trails and roads will be kept free of either snow filled or brush filled berms.

G. Scenic Resources

The sale is located on a west facing slope and may be visible from some ridgeline trails and valley bottom trails to the east and west. This unit may be visible from sections of the Minto Flats State Game Refuge and the Dunbar Trail. It is located in a small side valley and residuals will mostly obscure it from view.

H. Cultural Resources

The TVSF Management Plan does list 4 cultural sites in the same management unit as this proposed harvest. However none are reported within the harvest area. The State Office of History and Archaeology (OHA) do not list any sites on its inventory and had no comment during its review of the FY 2014-2018 FYSTS. During the course of activities associated with this timber sale, cultural and/or paleontological resources may be inadvertently discovered. Should such discovery occur, these sites shall be protected from further disturbance and OHA contacted immediately so that compliance with state laws governing cultural resources may begin.

Under the Alaska Historic Preservation Act (AS 41.35), all burials on state land are protected. If burials or human remains are found, all land altering activities that would disturb the burial or remains shall cease and measures taken to protect it in place. OHA and a law enforcement officer will be notified immediately to ensure that proper procedures for dealing with human remains are followed.

I. Sustained Yield and Allowable Cut

The Alaska Forest Resources and Practices Act (AS 41.17.060 (c)) and Article VIII Sec. 4 of the State Constitution require that the State forest land be managed on a sustained yield basis. Sustained yield is defined in the Alaska Forest Resources and Practices Act (AS 41.17.950(25)):

“Sustained Yield” means the achievement and maintenance in perpetuity of a high level annual or regular periodic output of the various renewable resources of forest land and water without significant impairment of the

productivity of the land and water, but does not require that timber be harvested in a non-declining yield basis over a rotation period.

The Annual Allowable Cut (AAC) is the amount that can be harvested from forest land managed for forestry purposes in a year under sustained yield management. The AAC in the Fairbanks Area is outlined in the publication Timber Inventory of State Forest Lands in the Tanana Valley (Hanson, 2013). This sale complies with sustained yield/allowable cut principles outlined in the Fairbanks Area Five-Year Schedule of Timber Sales for FY 2014-2018. The AAC for the Fairbanks Management Area is approximately 4,606 acres. The AAC will not be exceeded for this proposed sale.

J. Silvicultural Prescription

1. **Stand Silvics.** The normally merchantable species of trees within the Tanana Valley are white spruce, balsam poplar, aspen and birch. Data and research on regeneration and growth characteristics of these species are compiled within the Resource Analysis of the Tanana Valley State Forest (TVSF) Management Plan. The harvest and reforestation systems available in Interior Alaska are also reviewed and listed in the Resource Analysis. The results of the public and agency discussions for harvest and reforestation are discussed in the TVSF Management Plan. Silvicultural harvest systems that facilitate even-aged (natural) management are generally preferred. They mimic the ecological impact of wildfire and other disturbances and result in the greatest increase in site productivity. Even-aged management is normally accomplished through clear cuts, patch cuts and heavy partial cuts (such as seed tree or shelterwood systems), which opens up the site to maximum solar gain. This results in the greatest production of young hardwood that is important to wildlife. Even-aged management techniques are utilized to provide young, vigorously growing stands in juxtaposition to older, undisturbed stands. Such placement of harvest units can optimize natural seedling and the edge effect. The proposed sale is a diameter limit harvest that will open the forest and provide areas for younger more vigorous birch and spruce trees to grow. This will be accomplished through natural regeneration of residuals within the stand, by seeding in from adjacent stands and by hand planting if necessary.
2. **Specific Management Objectives.** The overall stand composition is primarily birch with a spruce regeneration component. The management objective is to utilize the current commercial value of this timber stand before existing defect leads to further damage. The spruce regeneration component will release once the birch overstory is removed. The spruce component will also naturally regenerate and with some hand planting if necessary, the original basal area will be exceeded. The objective is to remove mature birch, opening the site to allow for release of spruce regeneration and birch reestablishment. It is reasonable to assume that these objectives will be realized under the recommended prescription.
3. **Harvest Methods.** The sale will be harvested by a clear cut with reserves silvicultural system. All birch 6" DBH and larger will be removed. Snags, spruce, aspen and birch smaller than 6" will not be cut. Residual trees will be protected from damage during harvest operations. Harvesting will be by the whole tree yarding system. Slash disposal at the landings will be by burning or by salvage for fuelwood use.

4. **Regeneration.** Birch regenerates by seed and vegetatively. Adjacent sites are composed of mixed spruce and birch stands that will provide seed to this unit. The existing spruce component within the unit will be protected during harvest operations. A regeneration survey will be conducted three years after the harvest. If the survey indicates inadequately stocked areas greater than 1/2 acre or totaling 10% of the unit acreage, then additional site preparation and hand planting will be performed on non-stocked areas. The goal for regeneration is to achieve a minimum of 450 evenly distributed trees per acre.

K. Transportation

The planned access to the proposed sale is by existing primary and secondary all season forest road and proposed spur road. The tract is accessed from Fairbanks by driving southwest on the Parks Highway to milepost 343. Turn north on the Old Nenana Highway and drive approximately 2 miles. Turn west on the Standard Creek logging road (primary all season) and drive approximately 26.5 miles. No additional road construction is required. The 26.5 miles of existing primary all season forest road will be maintained to the standards set out in the AFRPA.

L. Erosion

There are two soil erosion concerns: surface erosion and mass wasting of soil and debris. Road construction and poor maintenance of roads primarily causes surface erosion. To avoid erosion, debris will be placed back onto skid trails and water bars installed if necessary. Harvesting will be suspended during periods of thawing soil conditions to assure there is minimal soil disturbance. The location of skid trails will optimize skidding distances and provide for adequate landing areas. The other aspect of erosion (mass wasting and debris avalanches) normally occurs on slopes of more than 70 percent. In the area of the proposed timber sale slopes do not reach this grade.

M. Mining

This sub-unit of the TVSF has moderate mineral potential however; there are no mining claims within the sale area. More detailed information on subsurface resource use is found in the TVSF Management Plan. Other than providing access, and sharing some of the same access roads, this sale will have no impact on the potential mining resources or mining activity in this area.

N. Materials

No rock materials will be required for the construction of access roads.

O. Economics

In addition to generating royalties to the State's general fund, the proposed sale will create economic benefits to the Fairbanks North Star Borough and to other locations in Alaska. The Borough business community will receive direct economic benefits from providing support services for the operators through sales of fuel, food, housing, medical and miscellaneous supplies. The residents of the Borough will receive an indirect benefit through taxes paid to cities and the Borough by the operator and employees during the course of the timber harvest operation.

The sale is expected to benefit the local economy by providing jobs. It will have a positive impact on local employment by generating numerous man-hours of work associated with the harvest and transportation of wood products from this sale. Additionally the public may benefit from access to additional personal use fuel wood areas.

VI. MARKET CONDITIONS

Interior Alaska has a growing demand for biomass and firewood and a sustainable market for saw timber. Heating oil continues to be more costly in the interior than the national average therefore residents are looking for an alternative and the only affordable one is wood. Local businesses are currently producing wood pellets as an alternative to traditional firewood. This market addresses an ongoing air quality issue in the Fairbanks area because these manufactured pellets produce almost no emissions. As this market continues to grow, the demand for material will increase. Other businesses are also looking into the use of biomass as a feedstock for producing electricity and heating alternatives in rural Alaska.

With improvements in wood stove technology for reducing emissions, firewood is also a viable alternative to high cost heating oil. The demand for firewood has steadily increased in the past few years and will likely continue to increase. Local suppliers of firewood continue to have a demand for accessible timber sales to deliver their product.

Residential construction and commercial operations throughout Alaska still need sawn products to support their operations. Local businesses that produce these products continue to pay for the delivered material.

These three markets create jobs in the forest products industry. Loggers, log truck drivers, commercial firewood cutters and mill workers all benefit from a sustainable timber market. This sale will provide the material needed to sustain these industries. As the economy continues to rebound there will be more demand for the products that this sector of the labor force provides.

VII. ALTERNATIVE ACTIONS

There are four possible alternatives to consider for this sale. A discussion of each of the four alternatives follows:

1. To continue the sale(s) as proposed.

This alternative meets the objectives of the Five-Year Schedule of Timber Sales and DNR'S constitutional mandate. It also meets the silvicultural objective of improving forest vigor, provides for a value-added end product and creates additional jobs in Alaska due to the combination of road building, logging, and trucking. This alternative also complies with the management objectives of the TVSF Management Plan for Unit 4D.

2. To modify the sale(s) by making them smaller or larger.

The proposed sale unit is a logical setting for typical commercial logging equipment in Interior Alaska and has been altered from its original configuration to be more cost effective. The size of the sale is designed to be large enough to be economically viable considering access development and mobilization costs and distance to processing facilities. Sales of this size are appropriately balanced to maintain other resource values as well as provide economic benefits to the Tanana Valley.

3. **Defer the sale of this timber to a later date.**

Deferring harvest to a later date would fail to meet many of the objectives of the sale program. One of the main objectives is to make State-owned timber consistently available to the timber industry.

4. **Do not offer this timber for sale.**

This alternative would result in not meeting any of the objectives outlined for this management action. Utilization of the forest resource would not be achieved. There would be no significant contribution to the State and local economies. This alternative would delay the management objectives planned for the area, deny making a source of raw materials available to the local wood products industry, and would delay the harvest of mature trees, prior to the onset of disease or insect infestation. Decay in infected and infested mature hardwood pole and saw timber results in the loss of economic value.

VIII. PUBLIC NOTICE

The preliminary best interest finding and decision are to be publicly noticed in compliance with AS 38.05.945. Notice will be posted on the Alaska Online Public Notice System as well as both physical and electronic mailing lists.

IX. PRELIMINARY FINDING

After due consideration of all pertinent information and alternatives, the DNR has reached the following preliminary decision: To offer for sale approximately 36.4 acres of birch to provide fuelwood as proposed in Alternative 1 and described in the PBIF. Public notice will be accomplished in accordance with AS 38.05.945. The DOF finds that this preliminary decision satisfies the objectives stated in this document and it is in the best interest of the State to proceed with this action under its authority of AS 38.05.035(e) (Powers and Duties of the Director) & AS 38.05.110-120; 11 AAC 71 (Timber Sale Statutes and Regulations; and AS 41.17.010-.950 and 11 AAC 95 (Forest Resources and Practices Statutes and Regulations).

Prepared and recommended by: Kevin Meany, Resource Management Forester

X. SIGNATURE

Kathryn Pyne, Fairbanks Area Forester
Alaska Division of Forestry

Date

MAP

